REMARKS

Claims 24-62, 64-66 and 74-84 are pending in this application. Claims 24, 26, 32, 33, 38, 41-47, 50, 53, 54, 56-59, 62, and 64 have been changed, claims 1-23, 63 and 67-73 have been cancelled and claims 74-84 have been added by this Amendment.

The Examiner stated that the reissue oath/declaration filed with the application is defective. The Examiner stated that the declaration may not adequately identify one error as per CFR 1.175(a)(1), and that an exact copying of the claim does not meet the requirement. However, MPEP 1414 states that "it is not sufficient to merely reproduce the claims with brackets and underlining and state that such will identify the error." Applicant has not reproduced claims with brackets and underlining in the reissue declaration, but has clearly pointed out several errors, as in paragraph 7.2 (page 5), 7.5-7.29, 7.31, etc., none of which present an exact claim with brackets and underlinings. Applicant therefore believes that the at least one error has been adequately identified in the reissue declaration.

The Examiner also stated that no statement exists that "all errors being corrected ... arose without deceptive intent." However, such a statement is present in the reissue declaration in paragraph 6, page 2, so that the reissue declaration is not believed to be defective.

The Examiner rejected claims 1-14 and 19-23 under 35 U.S.C. 103(a) as being unpatentable over Hara (5,379,663), and claims 15-18 under 35 U.S.C. 103(a) as being unpatentable over Hara in view of Rosenberg (5,576,727). Claims 1-23 have been cancelled to expedite prosection of the other pending claims, and Applicant respectfully respects that the rejection be withdrawn.

The Examiner rejected claims 24-27, 32-33, and 36-45 under 35 U.S.C. 103(a) as being unpatentable over Soma in view of Engel et al. and Gillick et al. Applicant has amended claim 24 to more clearly point out the features of the invention. Claim 24 recites a handheld force feedback device including a support housing able to be held by the hand of a user, a user manipulatable member engageable and moveable by a single thumb in two dimensions while the support housing is held by the user's hand, at least one sensor, at least one actuator, and a thumb trigger sensor detecting a trigger command including moving the user manipulatable member approximately orthogonally to the two dimensions. Applicant's device is a handheld device. A single thumb is able to move the member in both the cursor control dimensions as well as the trigger dimension.

None of the cited references suggest providing such a control. First of all, none of the references cited by the Examiner disclose a handheld device; the control of Soma is apparently

intended to be incorporated into a housing, such as on a laptop computer (col. 1, lines 18-29), since it emphasizes a decreased thickness (col. 1, 33-36; a small thickess is not as important for handheld devices), and Engel and Gillick disclose tabletop mouse devices. More importantly, claim 24 recites that the member is moveable by the thumb in two dimensions to control a cursor in two dimensions, and the same user manipulatable member is also moveable by the thumb in a trigger degree of freedom to provide a trigger command. None of the references disclose a 2 dimensional control which can also be moved for a trigger command. The wheel of Gillick can be moved in a trigger dimension, but the entire mouse must be moved to provide input in two dimensions, and both the mouse and the wheel cannot be controlled by a single thumb. The control of Soma does not include a trigger command operable with the same thumb that moves the user manipulatable member. Engel only discloses a standard mouse or trackball that does not include a trigger degree of freedom. The Engel device provides separate buttons which must be pressed separately to provide a trigger command.

Furthermore, claim 24 recites that the user manipulatable member is configured to allow the user to control the movement in two dimensions and perform the trigger command simultaneously using a single thumb on the contact surface of the user manipulatable member. This is disclosed, for example, in col. 4, lines 10-13 of the specification. None of the cited references suggest providing the ability to provide a simultaneous trigger command and movement in two dimensions. As explained above, none of the devices in the cited references provide a user manipulatable member that can be moved in two dimensions and perform a trigger command. Finally, claim 24 recites that the user manipulatable member is operable using the hand that holds the force feedback device. None of the cited refernences disclose devices that are even handheld, let alone disclose a device that a user can hold in the same hand that operates the user manipulatable member. All of the features of Applicant's claim assist in the handheld operation of the device, since the user can manipulate the member in various ways using a single thumb and carry the device in the same hand, allowing simple and easy interfacing to a computer. None of the handheld motivations are present in the cited references, and their disclosed devices do not anticipate that application.

The Examiner states that it would have been obvious to use Gillick's concept of a trigger sensor in Soma's invention. However, Gillick suggests nothing about using a trigger sensor in a handheld device or with a user manipulatable member that can be moved in two dimensions, and certainly does not suggest a device allowing two dimensional and trigger movement with a single thumb. Gillick's trigger sensor is limited to a simple rotating wheel on the housing of a mouse. In view of the above, Applicant believes that claim 24 is patentable over Soma in view of Engel and Gillick.

Claims 25-27, 32-33 and 36-45 are dependent on claim 24 and are believed patentable for at least the same reasons as claim 24. In addition, for example, claim 44 recites that the housing

is shaped to fit in a palm of a hand of the user while the thumb contact the contact surface, which is not suggested by the cited references. Applicant therefore believes that claims 24-27, 32-33, and 36-45 are patentable over Soma in view of Engel and Gillick, and respectfully requests that the rejection under 103(a) be withdrawn.

The Examiner rejected claims 28-30 under 35 U.S.C. as being unpatentable over Soma and further in view of Mikan. Claims 28-30 are dependent from claim 24, which is believed patentable over Soma as explained above. Mikan discloses a joystick having a pivoting handle, but suggests nothing about providing a trigger command, using the same thumb and user manipulatable member to move the user manipulatable member in two dimensions and provide the trigger command, or holding the device with the same hand that operates the user manipulatable member. Furthermore, there is no motivation to combine Soma, a planar cursor control device, with Mikan, a joystick device. In addition, claim 30 recites two actuators, one of which is grounded to the housing and the other which is carried, which is not suggested by the cited references. Applicant therefore believes that claims 28-30 are patentable, and respectfully requests the rejection be withdrawn.

The Examiner rejected claims 46-51 and 53-57 under 35 U.S.C. 103(a) as being unpatentable over Armstrong in view of Engel and Gillick. Applicant has amended claim 46 to more clearly point out the features of the invention. Similar to claim 24, claim 46 is believed patentable over Armstrong, Engel and Gillick since these references do not disclose or suggest a handheld device including a user control that can be both moved in two dimensions and simultaneously perform a trigger command, all using a single thumb of the hand that also holds the force feedback device. Armstrong discloses a tabletop sphere that can be rotated and translated, but discloses none of the handheld, thumb, or trigger features of Applicant's claim. Engel and Gillick do not disclose the features of claim 46 similar as explained above for claim 24. Claims 47-51 and 53-57 are dependent on claim 46 and are believed patentable for similar reasons. In addition, for example, claim 57 recites an actuator employing an electro-rheological compound, which is not believed disclosed or suggested by the cited references. In view of the foregoing, Applicant believes that claims 46-51 and 53-57 are patentable over Armstrong in view of Engel and Gillick, and respectfully requests that the rejection under 103(a) be withdrawn.

The Examiner rejected claims 58 and 60 under 35 U.S.C. 103(a) as being unpatentable over Soma in view of Engel et al., and rejected claim 59 also in view of Gillick. Claim 58 recites a method including providing a handheld force feedback device, sensing movement of a thumb member in two degrees of freedom, sensing trigger motion, and providing a feedback force, where the user manipulatable member is configured to allow the user to simultaneoulsy control the member in two degrees of freedom and perform the trigger command, and the member is operated with the hand holding the device. These features are believed patentable over Soma, Engel and Gillick for reasons similar to those described above, so that Applicant believes claims

58, 59 and 60 are patentable, and respectfully requests that the rejections under 103(a) be withdrawn.

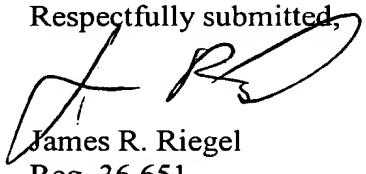
The Examiner rejected claims 61-62 under 35 U.S.C. 103(a) as being unpatentable over Soma in view of Engel and Armstrong. Claims 61-62 are dependent from claim 58, which is believed patentable over Soma, Engel and Armstrong as explained above and for reasons similar to claims 24 and 46, so that claims 61-62 are also beleived patentable. Applicant requests that the rejection be withdrawn.

The Examiner rejected claims 63 and 67-72 under 35 U.S.C. 103(a) as being unpatentable over Armstrong in view of Gillick, and rejected claim 73 also in view of Engel. Claims 63 and 67-73 have been cancelled to expedite prosecution, so that Applicant requests that the rejection under 103(a) be withdrawn.

The Examiner stated that claims 31, 35, 52, and 64-66 would be allowable if rewritten in independent form including base and intervening claim limitations. Applicant has rewritten claim 64 in independent form, including the limitations from claim 63, and so believes claim 64 is allowable. Applicant has added claims 74-77 which include substantive features from claim 31 and/or claim 52, and thus are believed patentable. Applicant has added claim 78, which includes substantive features from claim 35, and thus is believed patentable. Applicant has added claims 79-84, which includes a support housing, rotary moving arm member, a contact member slidable along the arm member, and sensors for detecting these motions. None of the cited references are believed to suggest this combination of features, so that claims 79-84 are believed patentable.

In view of the foregoing, Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,



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MARKED-UP VERSION OF AMENDMENTS

Please cancel claims 1-23 without prejudice.

24. (amended) A handheld force feedback device [coupled to] in communication with a computer for providing positioning signals to said computer for positioning a cursor displayed on a display device, said device comprising:

a support housing able to be held by a hand of a user;

a user manipulatable member engageable and moveable by a single thumb of said user in two dimensions relative to said support housing while said support housing is held by said hand of said user, said thumb contacting a contact surface of said user manipulatable member, wherein said movement in said two dimensions positions said cursor in two screen dimensions on said display device;

at least one sensor coupled to said user manipulatable member and [sensing] operative to sense movement of said user manipulatable member in said two dimensions, said sensor [providing] operative to provide positioning signals which control said positioning of said cursor on said display device;

at least one actuator coupled to said [user manipulatable member] handheld force feedback device, wherein said actuator [provides] is operative to provide a feedback force [in at least one of said dimensions of said user manipulatable member, wherein said force] to said user that facilitates the selection of options or icons displayed on said display device based on feedback signals generated by an application running on said computer; and

a thumb trigger sensor [for detecting] operative to detect a trigger command from said user and to cause a trigger signal to be sent to said computer, said trigger command including moving said user manipulatable member approximately orthogonally to said two dimensions, wherein said user manipulatable member is configured to allow said user to control said movement in said two dimensions and perform said trigger command simultaneously using said single thumb on said contact surface, and wherein said user manipulatable member is operable by said user using said hand that holds said handheld force feedback device.

25. A force feedback device as recited in claim 24 wherein said two dimensions are provided substantially in a single plane.

26. (amended) A force feedback device as recited in claim 25 wherein said [motion] trigger command includes moving [of] said user manipulatable member [is orthogonal] orthogonally to [a] said plane defined by said planar dimensions.

27. A force feedback device as recited in claim 24 wherein said at least one actuator is a first actuator, and further comprising a second actuator coupled to said user manipulatable member, wherein said second actuator provides a force in the other of said dimensions of said user manipulatable member.

28. A force feedback device as recited in claim 24 wherein said user manipulatable member is coupled to an arm member having rotary motion about a pivot point to provide motion in one of said two dimensions, wherein said actuator is coupled to said arm member to output forces about said pivot point.

29. A force feedback device as recited in claim 28 wherein said rotary motion of said arm member is limited to an arcuate path of less than ninety degrees.

30. A force feedback control device as recited in claim 28 further comprising a second actuator, and wherein said first actuator is grounded to said housing and wherein said second actuator is carried by said arm member.

31. A force feedback device as recited in claim 28 wherein said user manipulatable member is a sliding contact member which can be moved in a linear dimension approximately perpendicular to an axis of rotation of said arm member and in substantially the same plane as said rotary motion, thereby providing said motion in one of said two dimensions.

32. (amended) A force feedback device as recited in claim 24 wherein [said cursor can be positioned and displayed icons or options can be selected by a single hand of said user] said user holds said handheld force feedback device with a second hand in addition to said hand including said thumb contacting said user manipulatable member.

33. (amended) A force feedback device as recited in claim 24 wherein said at least one actuator is one of a motor, a brake, a piezo ceramic actuator, and a solenoid.

34. A force feedback device as recited in claim 24 wherein said user manipulatable member is coupled to a centering spring return that causes a bias on said user manipulatable member to return to a center position after it has been moved from said center position.

35. A force feedback device as recited in claim 24 wherein a centering spring bias on said user manipulatable member may be electrically actuated by a signal received from said

computer, allowing said force feedback device to have a centering mode and a non-centering mode, selected by said computer.

36. A force feedback device as recited in claim 24 wherein said cursor can be used to select an icon, wherein said trigger command selects said icon when said cursor is positioned over said icon.

37. A force feedback device as recited in claim 36 wherein said at least one actuator outputs a force to augment or restrain motion of said cursor on said screen.

38. (amended) A force feedback device as recited in claim 24 wherein [said image is a video game character] said actuator alters a frictional contact between a member coupled to said user manipulatable member and a member coupled to said support housing.

39. A force feedback device as recited in claim 24 further comprising a trigger actuator for causing resistance to said motion of said trigger command by said user based on a feedback signal from said computer.

40. A force feedback device as recited in claim 24 further comprising at least one additional control provided on said housing and operable by said user, wherein said additional control is operated by a different hand of said user than said hand operating said user manipulatable member.

41. (amended) A [method] force feedback device as recited in claim 24 wherein said at least one actuator outputs detents when said cursor overlaps or is positioned near an icon displayed on said screen.

42. (amended) A [method] force feedback device as recited in claim 41 wherein detents provide tactile click stops correlated with targets or options displayed on said screen.

43. (amended) A [method] force feedback device as recited in claim 42 wherein a detent correlated with a target or option is deactivated once said target or option is selected by said user using said force feedback device.

44. (amended) A [method] force feedback device as recited in claim [41] 24 wherein said housing is shaped to fit in a palm of said hand of said user while said thumb contacts said contact surface of said user manipulatable member [said user selects said target or option by causing a trigger signal to be sent to said computer, said trigger signal caused by a pressing motion of said user manipulatable member].

45. (amended) A [method] force feedback device as recited in claim 41 wherein said detents are output for use in a word processor or spreadsheet program provided on said computer.

46. (amended) A handheld force feedback device [coupled to] in communication with a computer for providing positioning signals to said computer for manipulating an image in a computer environment displayed on a screen by said computer, said device comprising:

a handheld support housing;

a user manipulatable member coupled to said housing and engageable and moveable by [one or more digits] a single thumb of said user in two degrees of freedom relative to said housing, said thumb contacting a contact surface of said user manipulatable member, wherein at least one of said degrees of freedom is a rotary degree of freedom about an axis of rotation;

at least one sensor coupled to said user manipulatable member and [sensing] operative to sense movement of said user manipulatable member in said two degrees of freedom, said sensor [providing] operative to provide positioning signals which control positioning of said image on said screen by said computer;

at least one [computer controlled brake] actuator coupled to said [user manipulatable member] handheld force feedback device, wherein said actuator is operative to provide a feedback force to said user that is correlated with an interaction of said displayed image in said computer environment [brake provides a drag in at least one of said degrees of freedom of said user manipulatable member]; and

a thumb trigger sensor [for detecting] operative to detect a trigger command from said user and to cause a trigger signal to be sent to said computer, said trigger command including a pressing motion by said [digit] thumb causing said user manipulatable member to move in a trigger degree of freedom different from said two degrees of freedom, wherein said user manipulatable member is configured to allow said user to control said movement in said two degrees of freedom and perform said trigger command simultaneously using said single thumb on said contact surface, and wherein said user manipulatable member is operable by said user using said hand that holds said handheld force feedback device.

47. (amended) A force feedback device as recited in claim 46 wherein [said housing is able to be held and operated by a single hand of a user] said user holds said handheld force feedback device with a second hand in addition to said hand including said thumb contacting said user manipulatable member.

48. A force feedback device as recited in claim 46 wherein the other of said two degrees of freedom is a linear degree of freedom and wherein said rotary degree of freedom allows a pivoting motion of said digit of said user.

49. A force feedback device as recited in claim 47 wherein said two degrees of freedom are approximately in the same plane.

50. (amended) A force feedback device as recited in claim 46 wherein said at least one actuator includes [brake is] a first brake providing a drag in a first of said two degrees of freedom, and [further comprising] a second computer controlled brake coupled to said user manipulatable member[, wherein said second brake provides] and providing a drag in a second one of said degrees of freedom of said user manipulatable member.

51. A force feedback device as recited in claim 50 wherein said user manipulatable member is coupled to an arm member having rotary motion about a pivot point, wherein said first brake is coupled to said arm member to output forces about said pivot point.

52. A force feedback device as recited in claim 51 wherein said user manipulatable member is a sliding member which can be moved along at least a portion of said arm member in a linear degree of freedom, and wherein said second brake outputs forces in said linear degree of freedom.

53. (amended) A force feedback device as recited in claim 46 wherein said image is a cursor that can be used to select an icon displayed on said screen, wherein said trigger command selects said icon when said cursor is positioned over said icon.

54. (amended) A force feedback device as recited in claim 46 wherein said [brake] actuator outputs a force controlled by said computer to provide tactile clicks correlated with targets or options displayed on said screen.

55. A force feedback device as recited in claim 46 wherein said device is provided in an automobile dashboard or automobile steering wheel.

56. (amended) A force feedback device as recited in claim 46 wherein said image is a video game character provided in a video game environment [said at least one brake includes an electromagnetic coil].

57. (amended) A force feedback device as recited in claim 46 wherein said at least one [brake] actuator employs an electro-rheological compound.

58. (amended) A method for providing positioning signals to a computer from a user for manipulating a displayed cursor on a screen and for providing force feedback to said user, said method comprising:

providing a handheld force feedback device [coupled to] in communication with said computer, said handheld force feedback device including a thumb member including a contact surface engageable and moveable by a single thumb of said user in two degrees of freedom while said device is held by said hand of said user;

sensing movement of said thumb member in said two degrees of freedom using at least one motion sensor and providing positioning signals to said computer in accordance with said sensed movement, wherein said positioning signals are used by said host computer to move a cursor displayed on a screen in two dimensions of said screen; [and]

providing a feedback force [drag in said two degrees of freedom of said thumb member] using at least one [braking] actuator coupled to said [thumb member] handheld force feedback device, wherein said feedback force [drag] facilitates selection of an icon or option displayed on said screen by said cursor[.] ; and

sensing trigger movement of said thumb member in a different degree of freedom than said two degrees of freedom of movement of said thumb member, wherein said trigger movement indicates a trigger command from said user and causes a trigger signal to be sent to said computer, wherein said user manipulatable member is configured to allow said user to control said movement in said two degrees of freedom and perform said trigger command simultaneously using said single thumb on said contact surface, and wherein said user operates said user manipulatable member using said hand that holds said handheld force feedback device.

59. (amended) A method as recited in claim 58 [further comprising detecting a trigger command from said user,] wherein said trigger command [including] includes a pressing motion of said thumb member, wherein said trigger command is sent to said computer to be used to select an option or icon displayed on said screen with said cursor.

60. A method as recited in claim 58 wherein said two degrees of freedom are substantially in a single plane.

61. A method as recited in claim 58 wherein one of said degrees of freedom is a rotary degree of freedom and another of said degrees of freedom is a linear degree of freedom.

62. (amended) A method as recited in claim 58 wherein said at least one actuator includes brakes output drag to hinder motion of a rotating member coupled to said thumb member and hinder a sliding motion of said thumb member.

Please cancel claim 63 without prejudice.

64. (amended) A handheld force feedback device [as recited in claim 63] in communication with a computer for providing positioning signals to said computer for positioning a cursor displayed on a screen, said device comprising:

a support housing;

a user manipulatable member coupled to said housing and engageable and moveable by a digit of said user in two degrees of freedom relative to said housing while said housing is held by said hand of said user, wherein at least one of said degrees of freedom is a rotary degree of freedom about an axis of rotation;

a spring return mechanism coupled to said user manipulatable member to provide a centering bias on said user manipulatable member toward a center position of said rotary degree of freedom when said user manipulatable member has been moved from said center position, wherein said spring return mechanism is electrically actuated by an external signal received from said computer, allowing said spring return mechanism to be selectively applied in a centering mode and allowing said spring return mechanism to have no effect in a non-centering mode;

at least one sensor coupled to said user manipulatable member and sensing movement of said user manipulatable member in said two degrees of freedom, said sensor providing positioning signals which control said positioning of said cursor on said screen;

at least one actuator coupled to said user manipulatable member, wherein said actuator provides a force in one of said degrees of freedom of said user manipulatable member; and

a trigger sensor for detecting a trigger command from said user, said trigger command including a pressing motion causing said user manipulatable member to move in a trigger degree of freedom different from said two degrees of freedom.

65. A force feedback device as recited in claim 64 wherein said external signal is controlled by a video game running on said computer.

66. A force feedback device as recited in claim 64 wherein said spring return mechanism is coupled to a pivotable arm member providing said rotary degree of freedom, and further comprising a centering spring coupled to said user manipulatable member to provide a centering bias in another of said two degrees of freedom.

Please cancel claims 67-73 without prejudice.

Please add the following claims:

74. (new) A handheld force feedback device in communication with a computer for providing positioning signals to said computer for manipulating an image in a computer environment displayed on a screen by said computer, said device comprising:

a support housing able to be held by a hand of a user;

a sliding contact member engageable and moveable by a thumb of said user in two dimensions relative to said support housing while said support housing is held by said hand of said user, one of said two dimensions being a linear dimension, wherein said movement in said two dimensions positions said cursor in two screen dimensions on said display device;

an arm member coupled to said sliding contact member, said arm member operative to rotationally move about a pivot point to provide motion in one of said two dimensions, wherein said linear dimension is approximately perpendicular to an axis of rotation of said arm member and is in substantially the same plane as said rotary motion;

at least one sensor coupled to said user manipulatable member and operative to sense movement of said sliding contact member in said two dimensions, said sensor operative to provide positioning signals which control said positioning of said cursor on said display device;

at least one actuator coupled to said arm member to output forces about said pivot point, wherein said forces facilitate the selection of options or icons displayed on said display device based on feedback signals generated by an application running on said computer; and

a trigger sensor for detecting a trigger command from said user, said trigger command including moving said sliding contact member approximately orthogonally to said two dimensions.

75. (new) A force feedback device as recited in claim 74 further comprising a second actuator to output forces on said sliding contact member in said linear dimension, and wherein said first actuator is grounded to said housing and wherein said second actuator is carried by said arm member.

76. (new) A force feedback device as recited in claim 74 wherein said image is a cursor controlled to move in two dimensions of said screen, wherein said cursor can be used to select an

icon, wherein said trigger command selects said icon when said cursor is positioned over said icon.

77. (new) A force feedback device as recited in claim 74 wherein said image is a video game character provided in a video game environment.

78. (new) A handheld force feedback device in communication with a computer for providing positioning signals to said computer for positioning a cursor displayed on a display device, said device comprising:

a support housing able to be held by a hand of a user;

a user manipulatable member engageable and moveable by a thumb of said user in two dimensions relative to said support housing while said support housing is held by said hand of said user, wherein said movement in said two dimensions positions said cursor in two screen dimensions on said display device;

at least one sensor coupled to said user manipulatable member and operative to sense movement of said user manipulatable member in said two dimensions, said sensor operative to provide positioning signals which control said positioning of said cursor on said display device;

at least one actuator coupled to said user manipulatable member, wherein said actuator provides a force in at least one of said dimensions of said user manipulatable member, wherein said force facilitates the selection of options or icons displayed on said display device based on feedback signals generated by an application running on said computer, wherein a centering spring bias on said user manipulatable member may be electrically actuated by a signal received from said computer, allowing said force feedback device to have a centering mode and a non-centering mode, selected by said computer; and

a trigger sensor for detecting a trigger command from said user, said trigger command including moving said user manipulatable member approximately orthogonally to said two dimensions.

79. (new) A handheld device for generating at least two control signals, said device comprising:

a support housing;

an arm member disposed within said support housing, said arm member being moveable in rotary dimension within said support housing about a pivot point;

a contact member slidably mounted on said arm member, said contact member being slidable by a user in a linear dimension along said arm member, wherein said contact member is engageable and moveable in said rotary and linear dimensions by a thumb of said user relative to said support housing while said support housing is held by said hand of said user;

a first sensor coupled to said arm member for sensing movement of said arm member along said arcuate path; and

a second sensor coupled to said contact member for sensing linear movement of said contact member along said arm member.

80. (new) A handheld device as recited in claim 79 wherein said sensors are operative to provide positioning signals which control a positioning of a cursor on a display device of a computer in communication with said handheld apparatus.

81. (new) A handheld device as recited in claim 80 further comprising at least one actuator coupled to said arm member to output forces about said pivot point, wherein said forces facilitate the selection of options or icons displayed on said display device based on feedback signals generated by an application running on said computer.

83. (new) A handheld device as recited in claim 79 further comprising a third sensor coupled to said arm member, said third sensor detecting a downward pressire on said contact member and in response thereto generating a signal for implementing a predetermined function.

84. (new) A handheld device as recited in claim 79 wherein said device is capable of being operated with one hand of a user.